by the "pro-technology crowd" to beat back further attempts to bring about anti-technology social decisions.

Attitudes toward the court are difficult to classify. One can find government officials, industrialists, public interest advocates, science policy specialists, and academic scientists on either side of the issue. In some cases, an individual's attitudes toward the court seem shaped by his perception as to how well his "side" would fare before such a court. Thus, antagonists on the safety of food additives—Howard E. Bauman, vice president of the Pillsbury Co., and James S.

Briefing

New Violations of Soviet Nuclear Test Limit?

The Soviet Union detonated an underground nuclear blast on 28 August which—according to shock wave readings by government seismometers—could have been 250 kilotons in yield, or well beyond the 150-kiloton limit the Soviets have previously said they would observe.

The 150-kiloton limit is found in two pending treaties negotiated between the United States and the Soviet Union, one for weapons tests and one for peaceful explosions, that are now before the Senate for ratification. Although the treaties have not yet entered into force, the Soviet government, on 10 August, announced it would abide by the provisions of the weapons treaty in the period before it takes effect.

The 250-kiloton estimate is based on measurements of the shock waves traveling through the body of the earth, called body waves (M_b), filed with the National Earthquake Information Service (NEIS) in Golden, Colorado. The NEIS collects readings from hundreds of stations operated by local governments all around the world; its main purpose is estimating the size of earthquake tremors.

Louis C. Pakiser, Jr., Chief of NEIS, says that body wave measurements from the twelve "most reliable" NEIS stations average a reading of M_b 5.7 for the 28 August tremor which occurred at Semipalatinsk, the Soviet underground nuclear weapons test site.

The 250-kiloton estimate is arrived at with figures developed by Howard C. Rodean, a Lawrence Livermore Laboratory explosion seismologist, and published in a public document.* According to the report, a tremor of M_b 5.7 would have been produced by a 250-kiloton explosion in "hard coupling" rock of the type reportedly found in Semipalatinsk.

(But calculating yields from body wave data is by no means a cut and dried procedure. One government official using NEIS data concluded the blast could have been only 120 kilotons.)

Rodean, speaking for himself and not his laboratory, says it is possible to use NEIS data to estimate Soviet blasts relative to one another, so long as blasts at the same site are compared and assuming the waves are propagating in the same manner. If these assumptions are made, then the 28 August shot was somewhat smaller than a previous 4 July shot at Semipalatinsk which the same twelve NEIS stations recorded at M_b 5.9. According to Rodean's numbers, the 4 July shot had a yield of 400 kilotons. This earlier shot had already caused a considerable political stir because of reports it exceeded the 150-kiloton limit. Four hundred kilotons is within the range of uncertainty government officials admit exists about this event.

The U.S. government classified yield estimates of Soviet underground blasts this summer following the 4 July event and another one on 29 July at another site. The Administration was deeply embarrassed by these reports, because they came on the heels of the treaties' submission to the Senate. Emphasizing that it didn't really know whether violations had occurred, the Administration silenced ERDA from announcing future yields. ERDA, in keeping with the new policy, announced the August shot as soon as it happened, without mentioning yields. the ERDA information is based on a separate seismic network, run by the military and called the Atomic Energy Detection System.

The 150-kiloton limit is in a legal limbo at the moment, as the chances are slight that the Senate will ratify the treaties before a new Administration takes office. If President Ford is reelected, he will press for ratification. Jimmy Carter, on the other hand, has not said whether he favors ratification; however he has called for a joint 5-year moratorium on all underground nuclear tests.

In the meantime, the Administration would clearly like to keep Soviet yield estimates—especially ones above 150 kilotons—quiet. The above exercise shows that the scientific community and the public can make such estimates, anyway.—D.S.

TID 25572 (National Technical Information Service, Springfield, Va., 1971), p. 128, chart 7.16. $3.00.

NRC to Increase, Rethink Inspection

One of the tangible results of the disastrous 1974 fire at the Brown's Ferry nuclear power station is that the Nuclear Regulatory Commission (NRC) has decided to give more attention to fire prevention and such related things as the spacing of electrical cables in its inspection efforts. The agency has requested permission from the Office of Management and Budget to ask Congress for 25 or 30 new inspectors to be assigned to the task, and more sweeping changes in the inspection program may be in the offing. According to Ernst Volgenau, NRC's new director of inspection, a "complete reexamination of the entire philosophy of what we do, how, and why" is under way, with preliminary results promised in a few months. Volgenau, who took office in April and promptly began the reexamination effort, describes it as a "broad gauge study" that covers alternatives ranging from resident government inspectors at all nuclear facilities to a greater emphasis on inspection during the construction of the plants.

The present inspection force totals about 275, and their efforts are concentrated not primarily on direct inspection but rather on auditing what industry does to inspect itself—checking records, observing key tests, and checking procedures. For the Commission to take over the direct inspection of all phases of the nuclear industry would require about 10,000 inspectors, Volgenau says, and he is not going to recommend that to Congress. More realistic options appear to include mixing some additional direct inspection with such approaches as statistical sampling and analysis of the most likely causes of safety problems, so that they can be given greater attention.

A more active federal role in monitoring nuclear power plant operations has also emerged as part of Jimmy Carter's energy program. In the first television debate, Carter appeared to promise resident federal officers empowered to shut down the plants in the event of any malfunction. —A.L.H.